

CLAIMS

What is claimed is:

- JND AL7
1. A method for communication of data between a plurality of remote transceivers and a network based on data flows over multiple types of communication links disposed there between, the method comprising the steps of:
- 5
- establishing a private short-range wireless communication link between the plurality of remote transceivers and a hub, the hub maintaining data flows for each remote transceiver;
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- providing at least one hardwired communication link over which data flows are established between the hub and an access unit; and
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- supporting data flows over a subscription-based wireless communication link between the access unit and a base station, wherein the base station is in communication with the network.
2. A method as described in claim 1 further comprising the step of:
- 20
- making available a plurality of subchannels within the subscription-based wireless communication link for establishing data flows, wherein a data transfer rate on each subchannel is typically less
- 25
- than the nominal data transfer rate of any data flow.

3. A method as described in claim 2 further comprising the step of:

allocating available subchannels on an as-needed basis over the subscription-based wireless communication link to provide data transfers over two or more subchannels for higher speed transfers of at least one data flow between a remote transceiver and the network.

4. A method as described in claim 1 wherein the hub is based on an IEEE 802.11 standard.

5. A method as described in claim 1 wherein the hardwired communication link between the hub and the access unit is based on an IEEE 802.3 standard.

6. A method as described in claim 1 wherein the private wireless communication link supports multiple individual high speed data transfers for each of the remote transceivers.

7. A method as described in claim 1 wherein the subscription-based wireless communication link is also a long-range wireless communication link.

8. A method as described in claim 1 wherein the subscription-based wireless communication link is also a high speed wireless communication link.

9. A method as described in claim 1 wherein the remote transceivers are operably linked to remote computer terminals in communication with the network.
- 5 10. A method as described in claim 1 wherein communication between the hub and the remote transceiver is based on spread spectrum.
- 10 11. A method as described in claim 1 wherein the short-range wireless communication link is FHSS around 2.4 Gigahertz and each remote transceiver communicates with the hub over a unique channel.
- 15 12. A method as described in claim 1 wherein the short-range wireless communication link is DSSS around 2.4 Gigahertz and each remote transceiver communicates with the hub over a unique channel.
13. A method as described in claim 1 wherein the short-range wireless communication link is based on infrared.
- 20 14. A method as described in claim 1 wherein the network is an Internet.
15. A method as described in claim 1 wherein the at least one wired communication link includes at least one Ethernet link.

16. A method as described in claim 1 wherein the second type of wireless communication link is based on a radio frequency near 1.9 Gigahertz.

17. A method as described in claim 1 wherein the second
5 type of wireless communication link has a cellular range of greater than 1 mile.

18. A method as described in claim 1 wherein communication between the plurality of users and the hub is based on a wireless local area network (WLAN).

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Cont.
10 19. A method for communication of data between a plurality of remote transceivers and a network based on data flows over multiple types of communication links disposed therebetween, the method comprising the steps of:

15 establishing a first set of wireless communication links between the plurality of remote transceivers and a hub for transmission of data messages from terminal equipment coupled to the plurality of remote transceivers;

20 transmitting the data messages from at least one of the plurality of remote transceivers to the hub;
 receiving the data messages at the hub;
 routing data messages received by the hub over a hardwired link to a subscriber unit; and

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for higher speed transfers of at least one data flow between a remote transceiver and the network.

26 ~~26~~. A method as described in claim ~~19~~²³ wherein the hub is based on an IEEE 802.11 standard.

5 ~~27~~²⁷/~~26~~. A method as described in claim ~~19~~²³ wherein the hardwired communication link between the hub and the access unit is based on an IEEE 802.3 standard.

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24/. A method as described in claim ~~19~~²³ wherein the second wireless communication link supports multiple
10 individual high speed data transfers for each of the remote transceivers.

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~~25~~. A method as described in claim ~~19~~²³ wherein the first wireless communication link is also a long-range wireless communication link.

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15 ~~26~~. A method as described in claim ~~19~~²³ wherein the second wireless communication link is also a high speed wireless communication link.

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~~27~~. A method as described in claim ~~19~~²³ wherein the remote transceivers are operably linked to remote computer
20 terminals in communication with the network.

- 32 ²³/₂₈. A method as described in claim ²³/₁₉ wherein
communication between the hub and the remote
transceiver is based on spread spectrum.
- 33 ²³/₂₆. A method as described in claim ²³/₁₉ wherein the first
5 wireless communication link is FHSS around 2.4
Gigahertz and each remote transceiver communicates
with the hub over a unique channel.
- 34 ²³/₃₀. A method as described in claim ²³/₁₉ wherein the first
10 wireless communication link is DSSS around 2.4
Gigahertz and each remote transceiver communicates
with the hub over a unique channel.
- 35 ²³/₃₁. A method as described in claim ²³/₁₉ wherein the first
wireless communication link is based on infrared.
- 36 ²³/₃₂. A method as described in claim ²³/₁₉ wherein the network
15 is an Internet.
- 37 ²³/₃₃. A method as described in claim ²³/₁₉ wherein the at least
one wired communication link includes at least one
Ethernet link.
- 38 ²³/₃₄. A method as described in claim ²³/₁₉ wherein the second
20 type of wireless communication link is based on a
radio frequency near 1.9 Gigahertz.

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39 ~~38~~. A method as described in claim ~~19~~²³ wherein the second type of wireless communication link has a cellular range of greater than 1 mile.

40 ~~36~~. A method as described in claim ~~19~~²³ wherein
5 communication between the plurality of users and the hub is based on a wireless local area network (WLAN).

41 ~~37~~. A method as described in claim ~~19~~²³ wherein
10 communication of data messages to at least one of the plurality of transceivers is established in an inverse corresponding order.

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